

Claims

1- A fabric care composition comprising:

- i)- a nitrogen containing compound selected from a polyamino-functional polymer, a dye fixing agent, and mixtures thereof, and
- ii)- a scum reducing agent selected from a water-soluble cationic surface active agent; a polyoxyalkylene alkyl amine surface active agent, and mixtures thereof;
- with the proviso that when the sole nitrogen containing compound is a polyamino-functional polymer, the polymer is present in amounts greater than 1% by weight.

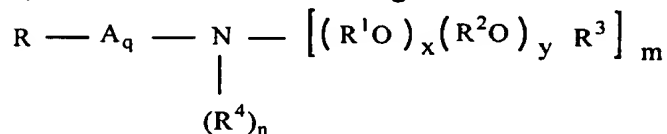
2-A composition according to Claim 1, wherein said water-soluble cationic surface active agent is of formula:



wherein R¹ is C₁₀-C₂₂ hydrocarbon group, or the corresponding ester linkage interrupted group with a C₁-C₄ alkylene group between the ester linkage and the N, each R is a C₁-C₄ alkyl or substituted alkyl, or hydrogen, and the counterion X⁻ is a softener compatible anion.

3-A composition according to Claim 2, wherein the water-soluble cationic surfactant is selected from N,N dimethyl-N-(2-hydroxyethyl)-N-dodecyl/tetradecyl ammonium bromide, myristoyl choline ester quaternary methylammonium halides, lauroyl choline ester methylammonium halides, cocoyl choline ester quaternary methylammonium halides, and mixtures thereof.

4- A composition according to ~~any one of~~ Claims ~~1-3~~, wherein the polyoxyalkylene alkyl amine surface active agent has the formula:

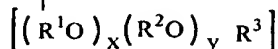


wherein R is selected from C₇-C₂₁ linear alkyl, C₇-C₂₁ branched alkyl, C₇-C₂₁ linear alkenyl, C₇-C₂₁ branched alkenyl, and mixtures thereof; R¹ is ethylene; R² is selected from C₃-C₄ linear alkyl, C₃-C₄ branched alkyl, and mixtures thereof; R³ is selected from hydrogen, C₁-C₄ linear alkyl, C₃-C₄ branched alkyl, and mixtures

thereof; R^4 is selected from hydrogen, C_1 - C_4 linear alkyl, C_3 - C_4 branched alkyl, and



mixtures thereof; A is



R^5 is selected from $-(R^1O)_x(R^2O)_y$ unit, C_1 - C_{16} linear alkyl, C_1 - C_{16} branched alkyl, C_1 - C_{16} linear alkenyl, C_1 - C_{16} branched alkenyl, and mixtures thereof;

wherein the index m is 1 or 2, the index n is 0 or 1, provided that when m is equal to 1, n is equal to 1; and when m is 2 n is 0;

wherein the index x is from 0 to about 50, preferably from 1 to 25,

wherein the index y is from 0 to about 10;

wherein the index q is 0 or 1.

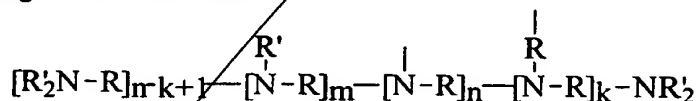
5-A composition according to Claim 4, wherein said index x is from 1 to 25.

6- A composition according to ~~either one of Claim 4 or 5~~, wherein said index m is equal to 2 and n is equal to 0.

7-A composition according to ~~any one of Claims 4-6~~, wherein said polymer comprises a polyamine backbone corresponding to the formula:

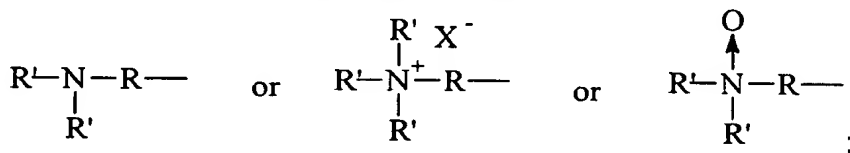


having a polyamine formula $V_{(n+1)}W_mY_nZ$ or a polyamine backbone corresponding to the formula:



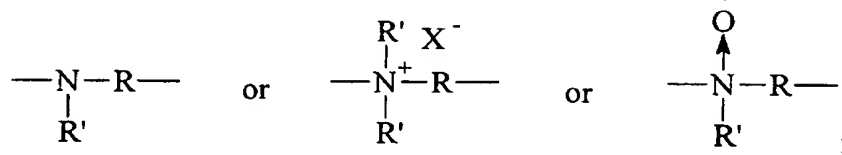
having a polyamine formula $V_{(n-k+1)}W_mY_nY'_kZ$, wherein k is less than or equal to n , said polyamine backbone has a molecular weight greater than 200 daltons, wherein

i) V units are terminal units having the formula:

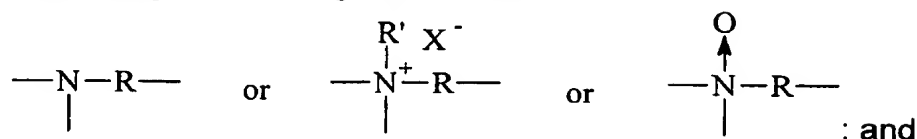


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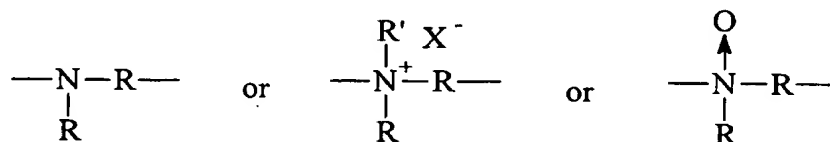
ii) W units are backbone units having the formula:



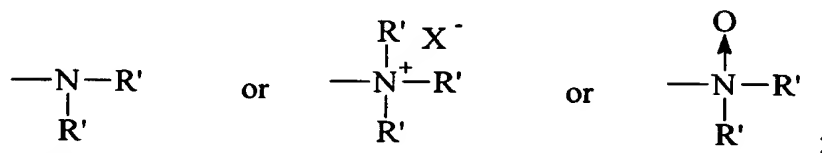
iii) Y units are branching units having the formula:



iv) Y' units are branch point for a backbone or branch ring having the formula:



v) Z units are terminal units having the formula:



wherein backbone linking R units are selected from the group consisting of C₂-C₁₂ alkylene, C₄-C₁₂ alkenylene, C₃-C₁₂ hydroxyalkylene, C₄-C₁₂ dihydroxyalkylene, C₈-C₁₂ dialkylarylene, -(R¹O)_xR¹-, -(R¹O)_xR⁵(OR¹)_x-, -(CH₂CH(OR²)CH₂O)_z(R¹O)_yR¹(OCH₂CH(OR²)CH₂)_w-, -C(O)(R⁴)_rC(O)-, -CH₂CH(OR²)CH₂-, and mixtures thereof; wherein R¹ is selected from the group consisting of C₂-C₆ alkylene and mixtures thereof; R² is selected from the group consisting of hydrogen, -(R¹O)_xB, and mixtures thereof; R⁴ is selected from the group consisting of C₁-C₁₂ alkylene, C₄-C₁₂ alkenylene, C₈-C₁₂ arylalkylene, C₆-C₁₀ arylene, and mixtures thereof; R⁵ is selected from the group consisting of C₁-C₁₂ alkylene, C₃-C₁₂ hydroxyalkylene, C₄-C₁₂ dihydroxyalkylene, C₈-C₁₂ dialkylarylene, -C(O)-, -C(O)NHR⁶NHC(O)-, -R¹(OR¹)-, -C(O)(R⁴)_rC(O)-, -CH₂CH(OH)CH₂-, -CH₂CH(OH)CH₂O(R¹O)_yR¹OCH₂CH(OH)CH₂-, and mixtures thereof; R⁶ is selected from the group consisting of C₂-C₁₂ alkylene or C₆-C₁₂ arylene; R' units are selected from the group consisting of hydrogen, C₁-C₂₂ alkyl, C₃-C₂₂ alkenyl, C₇-C₂₂ arylalkyl, C₂-C₂₂ hydroxyalkyl, -(CH₂)_pCO₂M, -(CH₂)_qSO₃M, -CH(CH₂CO₂M)CO₂M, -(CH₂)_pPO₃M, -(R¹O)_xB,

-C(O)R³, and mixtures thereof; B is selected from the group consisting of hydrogen, C₁-C₆ alkyl, -(CH₂)_qSO₃M, -(CH₂)_pCO₂M, -(CH₂)_q(CHSO₃M)CH₂SO₃M, -(CH₂)_q-(CHSO₂M)CH₂SO₃M, -(CH₂)_pPO₃M, -PO₃M, and mixtures thereof; R³ is selected from the group consisting of C₁-C₁₈ alkyl, C₇-C₁₂ arylalkyl, C₇-C₁₂ alkyl substituted aryl, C₆-C₁₂ aryl, and mixtures thereof; M is hydrogen or a water soluble cation in sufficient amount to satisfy charge balance; X is a water soluble anion; m has the value from 2 to 700; n has the value from 0 to 350; p has the value from 1 to 6, q has the value from 0 to 6; r has the value of 0 or 1; w has the value 0 or 1; x has the value from 1 to 100; y has the value from 0 to 100; z has the value 0 or 1.

8-A composition according to ~~any one of Claims 1-7~~, wherein said dye fixing agent is a cellulose reactive dye fixing agent.

9-A composition according to ~~any one of Claim 1-8~~, wherein the nitrogen containing compound is of from 1% to 25% by weight, ~~most preferably from 1% to 10% active by weight~~ of the composition.

10- Use of a surface active agent in a composition comprising a nitrogen containing compound selected from a polyamino-functional polymer, a dye fixing agent, and mixtures thereof, for reducing or preventing the formation of scum on fabrics or washing machine parts contacted with the composition.

11-Use according to Claim 9, wherein said surface active agent is selected from a water-soluble cationic surface active agent; a polyoxyalkylene alkyl amine surface active agent, a water-insoluble softening compound, and mixtures thereof.

Add
a₁
add
B₃
add
C₂

Ins B₁

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